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ABSTRACT

A workshop held in Baltimore was the second of two designed for the purpose of developing specific recommendations for research on adolescent literacy. Together these workshops, jointly sponsored by government and private sector entities, draw on the knowledge and experiences of researchers and practitioners who work with adolescents and their reading challenges. This workshop brought together primarily practitioners to present models in practice that address issues of adolescent literacy and to seek commentary from the individuals attending the workshop. The first part of this summary report presents a background discussion of the rationale for the workshop, highlights from the welcoming remarks, key issues from a review synthesizing the recent research on how reading develops during adolescence and the kinds of literacy instruction that can best meet the various needs of adolescents, and comments from meeting participants during the discussion period. The second part of the report presents synopses of four reading models being implemented in various parts of the country, with distinct instructional approaches--during the meeting, a discussion period followed the presentation of each model (the Corrective Reading model, the LANGUAGE! model, the Strategic Reading Course model, and the Strategic Instruction model). A synthesis of the comments made during all four discussion periods is presented at the end of the summary report because comments are applicable to all models. (NKA)

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CS 511 948

Summary of the Second Adolescent Literacy Workshop: Practice Models for Adolescent Literacy Success

Baltimore, Maryland
May 20, 2002

The Baltimore workshop was the second of two designed for the purpose of developing specific recommendations for research on adolescent literacy. Together these workshops draw on the knowledge and experiences of researchers and practitioners who work with adolescents and their reading challenges. The March workshop brought together primarily researchers, but also some practitioners, to review and summarize the knowledge base and gaps relevant to adolescent literacy and to develop a research agenda. The May workshop brought together primarily practitioners to present models in practice that address issues of adolescent literacy and to seek commentary from the individuals attending the workshop.

The workshop was jointly sponsored by government and private sector entities: the National Institute of Child health and Human Development, the American Federation of Teachers, the American Speech-Language-Hearing Association, the International Reading Association, the National Education Association, the National Institute for Literacy, and four Offices of the U.S. Department of Education: Vocational and Adult Education, Educational Research and Improvement, Elementary and Secondary Education, and Special Education and Rehabilitation Services.

The first part of this summary presents a background discussion of the rationale for the workshop, highlights from the welcoming remarks, key issues from a review synthesizing the recent research on how reading develops during adolescence and the kinds of literacy instruction that can best meet the various needs of adolescents, and comments from meeting participants during the discussion period. The second part presents synopses of four reading models being implemented in various parts of the country, with distinct instructional approaches. During the meeting a discussion period followed the presentation of each model. A synthesis of the comments made during all four discussion periods is presented at the end of this summary because they are applicable to all models.

Rationale for the Workshop: Research Needs in Adolescent Literacy

Significant advances have been made in understanding the abilities young children must acquire to develop beginning reading skills and the conditions under which they are most effectively taught, but very little evidence is available on how these abilities are best acquired and taught during adolescence. Specifically, it is well known that in learning to read, kindergarten and elementary school-age children must develop adequate alphabetic reading skills (including phonemic awareness and phonics abilities) and the ability to apply these word-reading skills fluently to both decoding and text-reading activities, and they must develop background knowledge, vocabulary, and reading-comprehension strategies to facilitate their understanding of what they read. It is also known that age and experience bring certain influences to the process of learning to read and write, particularly if basic reading skills are not developed prior to grade 3. However, we do not know to what extent what is known about beginning reading instruction applies to older students who fail to acquire the building blocks of reading.

First, it has been frequently stated that learning to read may be more difficult after age 9. However, the factors that might explain this decreased learning ability are not well understood. Do older students make little progress even when provided intensive, explicit, and systematic instruction in the building blocks of reading that they have not yet acquired? If so, does this failure to progress reflect a biologically based critical period for the acquisition of reading-related abilities prior to age 9? Does protracted failure in learning to read in kindergarten and elementary school lead to declines in self-esteem, increases in negative peer interactions, and other emotional factors that reduce motivation? Are the necessary quality, duration, and intensity of reading instruction simply not available in the upper-elementary, middle, and high school years? Or are combinations of these and other factors responsible for this apparent resistance to reading intervention by middle and high school students?

Second, it is not well understood which specific reading abilities are most predictive of difficulties in learning to read in adolescence. Do the relationships among phonemic awareness, phonics, fluency, vocabulary, and reading comprehension that predict age-appropriate reading development from kindergarten through grade 3 apply to older students? For example, while it is known that phonemic awareness, letter and number naming, and print awareness predict word-reading skills in beginning readers, longitudinal studies indicate that older disabled readers' literacy limitations are better predicted by fluency and naming tasks. Is it the case that adolescents who have difficulties learning to read have mastered a threshold amount of word-reading skills but are unable to negotiate the demands of content-area reading because of limitations in rate, background knowledge, and vocabulary knowledge? Or could it be that they require sustained interventions over time that are not available to them?

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Third, it is not well understood how adolescents can be motivated to learn to read, particularly when they have endured many years of failure. Thus, there is little information for middle and high school teachers about how best to present reading concepts and have students practice them in the environments typical to classrooms at these levels. Even if it were known which reading abilities are most critical for reading mastery during adolescence, research has not documented the most effective approaches to teaching those abilities.

Welcoming Remarks

In welcoming remarks to the workshop participants, Deputy Assistant Secretary Hans Meeder, of the Office of Vocational and Adult Education, U.S. Department of Education, explained the context for the conference and invited the participants' input. He emphasized the importance of treating adolescent literacy as a critical component of efforts to close the achievement gap and ensure academic excellence for all students. Mr. Meeder cited a number of NCES statistics demonstrating the gravity of the national trend in low literacy levels among adolescents. Currently, 23% (about 800,000) of 17-year-olds are reading below basic levels and are unable to search for basic information. Another 1.4 million drop out of school between grades 9 and 12. Achievement varies among ethnicities and economic classes, with a large difference between whites and Latinos and African Americans. Of students entering college, 25% need remedial reading.

The implications of these low literacy levels among adolescents are serious. Forty million adults read at a low level and 90 million at a level not adequate to today's needs. Employers have difficulty finding employees with adequate skills. In fact, a recent study of manufacturing companies in the United States found that more that 50% of companies find their workers lacking in basic math, written language, and comprehension skills. As a result, businesses and the national economy suffer.

Mr. Meeder's comments highlighted the Department of Education's imperative to identify and disseminate information on research-based practice, and he recognized the significance of the workshop series as a first step in determining what works in literacy instruction at the secondary level. Indeed, long-term research in this area will be critical to building a knowledge base on the literacy needs of adolescents; however, the urgency of the issue also demands immediate action. Action is needed in the form of changes in policy and practice that will ensure that every student becomes a successful reader—a reader prepared for continued education and the workplace of the 21st century.

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Adolescent Literacy—State of the Science

A review of the recent literature on a topic is a first essential step in describing the foundation of research and in identifying research gaps. Mary Beth Curtis, Ph.D., director of the Center for Special Education at Lesley University, Cambridge, Massachusetts, synthesized the recent research on adolescent reading regarding the kinds of literacy instruction that can best meet the various needs of adolescents and how reading develops during adolescence, including for those who experience reading difficulty. (Note to reader: This summary highlights only a few observations in the review. For the complete review, please refer to url: http://216.26.160.105/conf/nichd/synthesis.asp.) In reviewing the published research literature, her goal was threefold:

- to present a framework for characterizing the questions researchers have asked about adolescent reading,
- to determine the extent to which those questions have been answered, and
- to suggest some questions that have yet to be considered.

Her review is based on a search of the ERIC and PsycINFO databases from 1990 to the present for articles related to the reading of students in grades 6-12 which identified 155 research or technical reports and empirical studies.

Dr. Curtis assessed the studies according to the following factors as primary: print, language, cognition, or situation. "Print " refers to the processes and knowledge involved in identifying words on a page; "language," the knowledge and processes involved in putting words together to convey meaning; "cognition," the processes and knowledge involved in being aware of and able to make judgments about a text's message; "situation," the factors that influence engagement in the act of reading. The studies were further classified on the basis of whether the major purpose was (a) to describe how the factor was related to adolescent literacy, or (b) to evaluate the impact of instruction on the factor on adolescents' reading achievement (Table 1).

Table 1. Type and Number of Articles Reviewed from ERIC and PsycINFO, 1990-2002

Primary Factor in Article	Number of Descriptive Articles	Number of Impact Articles
Print	17	16
Language	23	16
Cognition	24	26
Situation	26	7
Total	90	65

Table 2 indicates the number of articles that focused on specific aspects of each of the four primary factors.

Table 2. Articles on Aspects of the Primary Factors of Literacy

Primary Factor	Aspect	Number of Articles
Print	Decoding Accuracy	20
	Fluency	13
Language	Meaning Vocabulary	12
	Sentence & Discourse Processing	27
Cognition	Content Knowledge	14
	Strategic Knowledge	23
	Ways of Knowing	13
Situation	Motivation	7
	Context	26

The studies varied in their methodological rigor. Among the studies on the impact of instruction, more studies used a clinical approach than a purely experimental one, with randomized assignment and use of control groups rare. Among the descriptive studies, validity and/or reliability of the measures on which conclusions were based were not always addressed.

Print Studies

Studies related to recognizing the printed representations of spoken words addressed two different aspects of adolescents' abilities: accuracy and fluency. Accuracy in recognizing words refers to the ability to convert printed words into their spoken language equivalents. Fluency involves word identification that is both automatic (i.e., occurring effortlessly, without use of conscious processing capacity) and characterized by appropriate phrasing, intonation, and stress. Longitudinal and contrastive studies indicate that accuracy and fluency are related to reading difficulties, but few studies have been concerned with understanding typical development of these aspects.

Evaluations of programs focusing on knowledge and application of symbol-sound relationships demonstrate that significant improvements can result in adolescents' performance on standardized reading tests. Program effectiveness will likely depend on how well instruction matches what students are missing (e.g., ability to analyze sounds, knowledge of phonics rules or syllable types, strategies for applying what is known).

Research looking at this possibility is yet to be done. Apart from providing students with specific interventions at the word level, allowing them to have the opportunity to preview texts (either silently or via listening) has been found to improve their oral reading accuracy.

Fluency probably continues to develop through adolescence, especially as teens' familiarity with and knowledge about words grow. Research suggests that the reading rates of middle school and high school poor readers can be improved via instruction that emphasizes reading practice. What is not evident from this work is who benefits the most from these kinds of interventions, and how much improvement in reading rate is sufficient to improve comprehension. When fluency instruction has been shown to improve comprehension, gains appear to occur in the efficiency of processing at the sentence level. The value of other aspects of fluency instruction for adolescents, such as prosodic modeling or techniques to increase rate of access to word meanings, has yet to be investigated.

Language

Two aspects of adolescents' language abilities related to reading are word meaning and sentence and discourse processing. Various elements of vocabulary growth continue to occur throughout middle school and high school, and by middle school, learners seem to have developed attitudes and beliefs about vocabulary learning that can affect (positively or negatively) further vocabulary growth. Moreover, among less skilled readers (especially low-income students), growth in knowledge of word meanings appears to begin to decelerate at around grade 6. Differences in vocabulary knowledge have been linked to differences in the ability to figure out the meanings of words from context and to recall synonyms. Adolescents' willingness and ability to resolve unknown vocabulary--through strategies such as use of context for monolingual readers and cognate awareness for bilingual readers—appear to be related to reading success. Encouraging students to actively process new word meanings, along with providing them with opportunities to apply and use new vocabulary knowledge, seem to be key features of successful programs

By grade 6, sentence and discourse factors contribute more to the comprehension performance of typically developing readers than do word factors. As students grow older, discourse factors begin to take on a more significant role than sentence factors, particularly on tasks requiring inferential processing. Social class differences have also been identified in adolescents' language use. Whereas working class teens tend to operate in a social, affective, and dialogic world, upper-middle-class teens tend to operate in an information-based, knowledge-oriented, and argumentative world. A number of studies suggest that teaching students how to take notes and to summarize can improve their overall comprehension performance, especially among adolescents with reading difficulties. Narrative approaches to instruction in sentence and discourse processing

have also been recognized as useful in assisting students who are having reading difficulties.

Cognition

Three elements of cognition are content knowledge, knowledge and regulation of strategies for text-processing, and knowledge about processes of knowing and learning. Early difficulty with reading has been shown to be associated with lower verbal ability and declarative knowledge in high school. Moreover, declarative knowledge and exposure to print appear to be significant predictors of high school students' comprehension. Research clearly demonstrates that the secondary school subject matter learning of all students can be improved by teachers' use of advance organizers. Adolescence is recognized as a time of marked growth in knowledge about sophisticated and elaborate problem-solving strategies as well as the ability to consider the hypothetical along with the real; yet, even among proficient high school readers, the ability to integrate and use information from multiple sources of written information can be lacking. It remains to be established, however, whether that ability to integrate stems more from a lack of opportunity to learn than it does from either reading or cognitive development.

A reciprocal, predictive relationship seems to exist between strategy use and motivation, such that intrinsic motivation seems to predict strategy use, and strategy use increases motivation. Emotional involvement with issues has also been shown to make it more difficult for teens to critically analyze positions related to those issues. Higher order strategic processing is responsive to instruction, particularly when the instruction is direct and long-term, includes modeling of the strategy, provides frequent and informed practice of strategy use, and emphasizes when and where the strategy can be used.

Adolescents' identities as literacy learners (e.g., what they learn, what practices they use to learn, their interest in and willingness to participate in reading instruction) seem to shape their construction of meaning from text; moreover, their identities can also be affected as they interact with texts and use text as a way to make sense of their lives.

The mechanisms whereby ways of knowing develop in adolescents and the role of literacy in these changes remain unclear. For instance, does reading provide learners with a reservoir of knowledge and experiences that shape the ways in which they respond? Are certain approaches to teaching reading (e.g., inquiry-based approaches) more effective than others in this regard?

Situation

Research concerned with motivation looked at the attitudes, interests, and desires of adolescents and their influence on reading and reading achievement. Research concerned with context consisted of studies related to the influence of teachers, schools, and

families on adolescents' reading development. National studies such as NAEP confirm that time spent reading is positively correlated with reading ability and with students' engagement in reading.

Social goal pursuit (rather than intrinsic value in reading) predicts effort in English class at the 6th and 8th grade levels. By high school, teens have greater belief in personal control over learning outcomes than younger children do. Quality and diversity of reading materials also seem to affect motivation to read, but opportunities for student decision-making and choice in terms of reading tasks and materials are frequently fewer in secondary schools than at the elementary level.

Discrepancies also seem to exist between the kinds of content area reading instruction that middle and high school students say they would like to receive (e.g., cooperative learning groups, study guides) and what they say they get (e.g., being required to write summaries and answer questions). Studies also show that presence of reading materials in the home as well as family discussions about school experiences and educational plans are related to adolescents' level of skill in comprehension.

Comments

Much of the adolescent literacy research conducted since 1990 has been concerned with understanding and improving the reading skills of teens who are experiencing difficulty. Such a focus is understandable, particularly given that as many as 40% of 13-year-olds seem to have difficulty interrelating ideas and making generalizations, while as many as 60% of 17-year-olds are unable to understand complicated literary and informational passages. However, an approach of viewing adolescent literacy primarily through the lens of struggling readers can be problematic for many reasons: it can encourage research that recommends overly simplistic solutions based on single factors; it can make it difficult to separate the causes of success in reading from the consequences; it can be difficult to recognize factors that function as mediators; and it can impede understanding of what is needed to raise literacy levels overall.

To make the review of literature manageable for the purpose of this workshop, the focus was on reading alone, excluding literature related to other aspects of adolescents' literacy development such as writing. The search was conducted by hand within only two databases, and the reliability of the categories was not established. The results of work appearing in books, reports, and dissertations were not included, and the narrow timeframe made the review susceptible to the influence of educational trends, such as inclusion. Nevertheless, it is a beginning in the process of identifying what is missing and in formulating a theory of development of literacy in adolescents.

Discussion

- One challenge is transfer of interventions—how to get into the classroom what is known to work, and what will be found in the future to work. Most classrooms do not have reading specialists. Some universities are doing a better job of giving more information to education students about the reading process and effective reading instruction, but the information does not seem to be integrated with teaching student teachers how to use the information. Perhaps there is some way to work more in conjunction with high schools to see how the information can be used.

- Research on motivation is sparse because it is difficult to measure and we have assumed it is the child's issue when it may be the teacher's issue. There are at least 30-50 important studies reported in motivation theory journals, so it is necessary to think across disciplines to find what we are looking for. The studies tend to move away from intrinsic to extrinsic motivation. Schools perpetuate this by trying to meet goals. However, what drives improvement in comprehension is intrinsic motivation.

- It is necessary to develop a theory of what drives students to do something such as read.

- The research on language minority students has tended to focus on what distinguishes the successful students from the other students. Success is characterized by the ability to draw across the languages and see the commonalties, for example, using cognates. The other students saw the languages as separate, different.

Introduction to the Research Priorities and Practice Models

Peggy McCardle, Ph.D., M.P.H., associate chief of the Child Development and Behavior Branch of the National Institute of Child Health and Human Development, expressed the themes that most individuals can become proficient readers, that reading instruction can be improved, and that failure can be prevented. Understanding how to achieve these outcomes will depend on more basic research on what is happening in reading development during adolescence and why. The development of curricula must be based on scientific principles that establish how well and under what conditions they work for which groups.

In the research priorities document from the first workshop, participants proposed that viewing literacy as a developmental process that continues and changes through middle and high school be the overarching principle of a research plan. They recommended structuring research studies in four major domains: learner characteristics, learning environments, dimensions of literacy, and teachers and instruction. Across all

domains there should be three elements: assessment and measurement, intervention (including overall instruction—the kinds of instruction that should continue throughout adolescence), and sociocultural issues (where the gap is not closing).

Dr. McCardle explained the format of the current workshop. Four practice models would be presented, then respondents with various philosophies would comment constructively on the models to suggest how they could be advanced and how research on these and similar models could be conducted to move the field forward. Also, if there are proven interventions, how can they be scaled up to a model that can be implemented more broadly? She emphasized that the four models presented are examples that are being presented to demonstrate a process of examination, brainstorming, improvement, and research regarding effectiveness. She indicated that the workshop cosponsors hope that this process will be adopted by model developers, implementers, and researchers. Dr. McCardle voiced the hope that adoption of such a process will lead to even more robust and useful models as well as to more cross-discipline collaborations that will increase both the researcher pool and the information on effective practices for adolescent literacy instruction and intervention.

The Corrective Reading Model

Corrective Reading, an accelerated reading intervention developed by SRA/McGraw-Hill and published in 1973, was designed specifically for older nonreading or struggling readers. Catherine Bardo, M.S., director of secondary curriculum in the Sacramento City Unified School District, described the implementation of the program in four middle schools (two of which were K-8 schools), three high schools, and two elementary schools (grade 6 only). The program in Sacramento is called The Goethe Model.

The School Population

The Charles M. Goethe Middle School in Sacramento City, a high-need school, was selected for testing the effects of the comprehensive direct instruction model and for developing the training models and systems that were necessary to implement the model on a school-wide basis. For years Goethe Middle School had had the reputation of being the poorest performing school in one of the poorest performing districts in California: 48% of Goethe's 7th and 8th grade students read at or below the 4th grade level. The average percentile score in reading was the 8th percentile for a 7th grader and the 6th percentile for an 8th grader.

The common risk factors associated with school failure were present at Goethe, for example, poverty and English as a second language. The student population was very

diverse culturally; the three largest population groups (African American, Hispanic, and Hmong) were fairly equally represented and prone to racial conflict, resulting in frequent gang fights. Goethe Middle School faced all the most serious problems that middle schools serving large numbers of at-risk students face across the nation.

Instructional Approach of the Model

Corrective Reading uses explicit instruction, connected and decodable text, and a systematic corrections procedure to teach phonemic awareness and blending, accuracy and fluency, general comprehension skills of cause and effect, making inferences, finding main ideas, sequencing events, and seeing humor. Comprehension skills are also developed through direct instruction that builds on background knowledge, vocabulary, and thinking strategies that enable students to understand expository text. The questions model for students how good readers think about their reading and introduce "big ideas," which are underlying concepts or principles that serve as keys to understanding. Reasoning, analytic skills, and writing are supported by content-rich texts, introduction to research skills, persuasive and expository writing, critiques, and inductive reasoning and inquiry.

In Sacramento, the course is offered during a daily, 50-minute class period as a supplement to students' regular language arts/English classes. The class replaces the students' free elective period. Lessons are scripted to support pacing, the use of examples, uniform wording, and positive reinforcement. Students have multiple opportunities to practice and master a skill until the end of a program level through teacher-directed work and independent student application. The difficulty of the practice examples increases gradually and steadily. Students can see their own progress through "reading checkouts" and by keeping error data.

Professional Development

The staff consists of *Corrective Reading* teachers, *Corrective Reading* coaches, and site administrators. Professional development is provided for all three groups. Since 1998, 1,000 teachers have been trained in the program.

An important element of the Goethe Model is the coaching that is provided to each reading teacher. Experienced reading teachers apply and interview for the coaching positions. Each reading coach is required to complete an 18-hour coaches practicum. Each morning the participants learn aspects of the coaching model, and in the afternoon the trainees work alongside an expert coach in the *Corrective Reading* classrooms at Goethe Middle School. The day ends with feedback sessions and role-play for the next day. After initial training, follow-up sessions are held in partnership with the Sacramento County Office of Education, and monthly meetings are held to provide support for the site coaches. In addition to the site coaches, the district funds one lead coach for

Corrective Reading. One goal of the training is to ensure fidelity in the implementation of the *Corrective Reading* model.

Assessments and Progress Monitoring

The program conducts pre- and post-placement testing of all students using the Multi-Level Academic Survey Test, and progress monitoring for 80% mastery. In Sacramento, Stanford Achievement Test Series, Ninth Edition (SAT 9) results are used for school- and district-wide reporting and progress monitoring purposes.

The Goethe Model includes a monitoring component to record student progress and to check for mastery. Teachers submit monthly reports that are processed by the secondary curriculum office. The final monthly report is sent to the site reading coach and principal. Sites use the information to determine individual student needs. Some sites have intervention teams that review student mastery and make recommendations for support. Three forms are used: teacher monthly report (to collect data), teacher report 2A (to report class mastery), class report 2A (individual mastery).

Evaluation

The *Corrective Reading* program is a direct instruction program that has over 30 years of data indicating that it can be used to accelerate the reading acquisition of older students with reading problems. These studies generally show that when implemented consistently (at least 4 days a week) by well-trained teachers, the growth rate in reading increases to two or three grade equivalents in one year, making it possible for many students to catch up in 1 year of instruction (see Grossen, 2002, for a review of the research). This pattern of results has been found with remedial readers in England, Australia, and North America; students with limited English; noncategorical implementations with special ed and regular ed struggling readers; and in special education classes.

The comprehensive school-wide direct instruction model was implemented at Goethe Middle School in Sacramento where students were performing well below grade level. (The average rate of learning was about 1/2 grade equivalent in 1 year.) The median scores in both reading and mathematics improved by 2 grade levels, indicating that the rate of progress for these students had generally quadrupled. Goethe Middle School made the largest gains on the SAT 9 for a low-achieving school in California, and Goethe Middle School achieved the 5th largest gains overall in California in reading, gaining 14 percentile points.

Since implementing the program in 1998, the number of English learners at Goethe Middle School scoring in the bottom quartile on the SAT 9 has been reduced by 18%. This reduction was greater than for other schools in the district or the state. Similarly, the number of English learners scoring at grade-level increased 8% (other

schools in the district and the state, 3%). (Note: A report of the evaluation by Bonnie Grossen is in press in *Reading and Writing Quarterly.*)

Planning for Implementation

Turning a low-performing school around, where student and teacher frustrations have evolved into large-scale disruptive and nonproductive behaviors, requires more than simply new teaching tools. The necessary additional factors for success imply rather drastic changes from the way professional development has generally occurred in the past. Successful implementation requires not only the curricular materials, but also adequate program-specific training, in-class coaching, and progress monitoring. The instructional programs and the factors of success identified in this research project have been collated in the newly published *REACH System.*

Grossen, B. The REACH system. Blacklick, OH: Science Research Associates.SRA, 2002.

The *LANGUAGE!* Model

LANGUAGE! is a comprehensive literacy intervention curriculum for grades 4-12 used in general education for students reading below grade-level, and in programs for special education, Title I, English language learners, resource, and inclusion. The curriculum was introduced in 1994-1995 in a pilot study with 45 adjudicated minority students, ages 13 to 17, who were compared to a nontreatment control group in the same correctional program. Nancy Eberhardt, M.A., editorial director and national trainer for Sopris West Educational Services, Longmont, Colorado, presented a description of the program.

The School Population

The curriculum is designed for students who are (a) performing at or below the 30th percentile on nationally standardized, norm-referenced tests (e.g., the SAT-9); or (b) performing 2 or more years behind grade-level placement. Such delays are due to difficulties resulting from learning English as a second language, language-based learning disabilities, and "curriculum casualties." *LANGUAGE!* has been implemented and evaluated in the Sacramento City Unified School District; Middle School Division; Vera O'Leary Junior High School, Twin Falls, Idaho, grades 7-9; Elk Grove Unified School District, Sacramento County, grades 7-9; Los Angeles County Office of Education, grades 7-12; Idaho Falls School District #91, grades 3-6; and the San Diego County Office of Education, grades 4-12.

Instructional Approach of the Model

The curriculum is a comprehensive, integrated literacy approach, systematically and explicitly teaching phonological, phonemic awareness, vocabulary, fluency, and text comprehension skills. *LANGUAGE!* is organized into three levels. Each level, containing 18 units, corresponds to approximately 1 year of study. Students work in groups and based on mastery performance level in the curriculum receive daily direct instruction in reading, spelling, writing and English/language arts skills.

Level 1, which focuses on the establishment of the alphabetic level of English, features phonemic awareness, phoneme-grapheme correspondences, decoding, encoding, accuracy and fluency in passage reading, vocabulary, comprehension, wide supplementary reading, introduction to form and function in grammar, and abundant writing and editing. Students learn how to read and spell words in the English language systematically and to use those words for the other literary skills in the level.

Level 2 expands on three strands: syllabication, morphology (Latin roots, prefixes, and suffixes), and Masterpiece Sentences (mastery of syntax for composition, reading comprehension, and listening comprehension). Level 2 also builds on Level 1 composition skills, emphasizing narrative and expository writing, and grammar strands. Among various other requirements, expository writing emphasizes reading and paraphrasing science and social studies text for report writing.

Level 3 incorporates two new strands: Greek morphology (Greek-combining forms that make up much scientific and technical English vocabulary) and literature. Literature is included throughout Levels 1 and 2, but it is not taught as a subject until students have mastered fundamental literacy skills. Literary concepts such as universal theme, narrative style, tone, point of view, plot, and character development are taught in Level 3. In addition to required mastery of vocabulary, English grammar, and usage in Level 3, students continue to be involved in wide supplementary reading and writing.

The curriculum provides all core materials needed, plus supplemental materials. to reinforce specific content and skills. Wide supplementary reading of literature and content material is an integral part of the curriculum. Selection of materials is facilitated through DRP-Booklink, a software program that uses a readability value to match students' reading ability with the readability level of the materials.

Fundamental to the curriculum is the instructional progression that underlies each lesson. Daily instruction systematically teaches students the structure of the language from sound to text. Beginning with phoneme awareness (i.e., the awareness of the speech sounds in words), students learn to link the correct letter or letter combinations to the speech sounds. Those letter/sound associations become the building blocks for words to read and spell. The instructional sequence addresses the meaning behind each word,

including multiple meanings, idiomatic meanings, and meaning that is derived from word parts such as roots, prefixes, and suffixes. This vocabulary is then applied to text reading and writing. Through the *LANGUAGE !* curriculum materials, which include materials for teachers and students, each of 54 study units contains integrated, interwoven reading and language arts strands. The integration of strands builds in immediate application and reinforcement; progress depends on understanding and applying the concepts in a unit of study. Each unit is sequential and cumulative—spiraling back to reteach and include previous concepts. Throughout *LANGUAGE!* fluency of performance in letter/sound associations, word-reading, text reading, and letter writing is emphasized.

Professional Development

There are multiple levels of professional development: (1) teacher training (6 days) to prepare teachers for immediate implementation of the curriculum, (2) training of trainers to build local capacity to train teachers in a district new to the curriculum, (3) clinics for coaches to provide in-class demonstration lessons, mini-workshops, and general support (Some districts provide certified coaches with unscheduled time for working in classrooms with beginning *LANGUAGE!* teachers.), (4) focused follow-up training to problem-solve and enhance implementation, and (5) administrative overviews and workshops to help decision makers understand the curriculum and to support its implementation.

Assessments and Progress Monitoring

There are three components to the assessment process in *LANGUAGE!*: placement, ongoing (formative), and summative. A placement test determines where a student needs to start in the sequence of units. The placement test comprises three brief measures: encoding (spelling), decoding (word identification), and grammar (knowledge and use of English sentences). Teachers learn how to give the placement test and use the results in the training. Student Mastery Books, the formative component of the assessment system, are used to document students' individual achievement and to motivate further progress. Summative tests, used at the end of six units of instruction, provide further documentation of student learning. For initial identification of students for intervention and to measure progress, schools may use standardized test scores. Ongoing formative and summative tests ensure mastery of the curriculum at a student's independent level.

In the Student Mastery Books, student performance is measured by criterion-based assessment, which is built into the curriculum. At least 80% mastery is required for advancement to the next unit. Because each unit is sequential and cumulative—spiraling back to reteach and include previous concepts, and dependent upon prior mastery—the 80% level proves an appropriate determinant of mastery. Structure for individual education programs and 504 plans is also built into the curriculum. Students who successfully complete Level 2 by the end of the 5th grade are returned to the conventional reading/language arts classroom for the 6th grade. All other students should

complete Level 3 before returning to the regular English classroom, whether they finish Level 3 at the end of grade 6 or grade 8. Completion of Level 3 ensures that older students are ready to perform independently in the regular English classroom.

To tailor supplementary and independent reading materials to student reading ability, Degrees of Reading Power, a sophisticated readability formula, has been used to establish a readability rating for each unit. Using the unit's readability rating and DRP-Booklink, which accesses 15,000 titles, teachers print lists of books students can select and read. Titles are from classic literature and from 15 other interest categories including adventure, sports, science fiction, history, biography, science, friends and relationships, and mystery.

Evaluation

Significant and positive results have been obtained with *LANGUAGE!* in a number of settings to date. The junior high and high school subjects have included nonreaders, second-language learners, special education students, and other poor readers. For most grade levels on most reading measures, the observed growth in relative standing suggests that these students can move toward normalizing their reading skills, even though for years they had made no growth in relative standing and could have fallen further behind their peers without an appropriate intervention. (Fletcher et al., 1994; Torgesen et al., 2001)

A pilot study funded by the National Center for Learning Disabilities, which involved adjudicated middle and high schools students with limited literacy, documented gains of 3 years in reading, comprehension, composition, and spelling during an average 22 weeks participation in the program. (Greene, 1996)

In another study, program effectiveness was evaluated with 345 7th-9th grade students in 11 schools in the Elk Grove School District during the 1999-2000 school year. The students were English language learners, special education, or general education students scoring in the bottom quartile on the Stanford Achievement Test. After 1 school year of instruction, students made statistically significant gains on SAT-9 Tests of Reading and Total Language (5.4 and 9.3 points, respectively) and on the GORT-3 comprehension scale (27 percentile points for 7th and 8th graders and 18 percentile points for 9th graders). (Moats, 2001)

During the 1998-1999 school year, three schools in the Sacramento City Unified School District were chosen for *LANGUAGE!* implementation based on the evidence that a majority (83%) of the students were performing below the 25th percentile in reading on the SAT-9; 43% of the students were classified as English language learners; 89% were on free or reduced lunch. Students (n=552) made statistically significant gains at all grades (6, 7, 8, and 10) on the Multilevel Academic Survey Test, a test of silent reading

comprehension. For virtually all grades and sub-tests, students made significant gains on the Woodcock-Johnson Tests of Achievement basic reading sub-tests.

Fletcher, J.M., Shaywitz, S.E., Shankweiler, D.P., et al. (1994). Cognitive profiles of reading disability: Comparisons of discrepancy and low achievement definitions. *Journal of Educational Psychology, 86*, 6-23.

Greene, J. F. (1996). Effects of an individualized structured language curriculum. *Annals of Dyslexia, 46*, 97-121.

Moats 2001

Torgesen, J.K., Alexander, A.W., Wagner, R.K., Rashotte, C.A., Voeller, K., Conway, T., & Rose, E. (2001). Intensive remedial instruction for children with severe reading disabilities: Immediate and long-term outcomes from two instructional approaches. *Journal of Learning Disabilities*, *34*, 33–58.

Planning for Implementation

To help schools plan for implementation, the program provides a comprehensive long-range plan (5 years) both electronically and in hard copy. The trainer or another expert works with district administrators to adapt this plan to the needs of the district. A critical element of implementation is appropriate training. An overview of the program is provided to administrators, as are follow-ups for administrators. For school and district leaders who are directly responsible for implementing and overseeing the curriculum, attendance at a complete training is recommended.

The Strategic Reading Course Model

Strategic Reading is an instructional component of the Talent Development High Schools (TDHS) model—a comprehensive school reform initiative designed to assist students in making successful transitions to standards-based courses. Alta Shaw, M.S., TDHS director of instruction at the Center for Social Organization of Schools of the Johns Hopkins University, described the model as it has been implemented in Baltimore, Philadelphia, and other districts.

The School Population

The course is designed for 9th-grade students whose reading level is 2+ years below their expected level. The average student entering many large nonselective high schools is reading almost 4 years behind grade-level, between the 5th- and 6th- grade levels. Many students for whom this model is appropriate have problems with fluency and comprehension, but not decoding, phonics, and word attack skills. Almost all new high school students can blend sounds to form words and will recognize a significant set of

common vocabulary words, but they do not read with ease and automaticity; therefore, they are unable to comprehend near- or at-grade-level texts.

Instructional Approach of the Model

Ninth-grade students are given a "double dose" of English, in two 18-week terms of 90-minute daily extended-period classes. The first term is *Strategic Reading* using high-interest, low-readability materials with a focus on fluency and comprehension skills, particularly related to reading informational texts.. The second term is the district's own English I syllabus, with supplementary materials for cooperative learning teams to continue the focus on fluency and comprehension.

There are four complementary learning activities in a typical *Strategic Reading* daily lesson. (1) The reading showcase: the teacher models the comprehension strategies of a mature reader, by "reading aloud and thinking aloud" to the class, commenting on what's going through her mind as she mentally interacts with the author. (2) The mini-lesson: the teacher instructs the class in a specific strategy (such as skimming subheadings and captions before reading an informational text), in elements of the writer's craft (such as the use of symbolism in literature), in word patterns in the context of reading (such as prefixes and suffixes), and in social skills for working in cooperative teams discussing reading. (3) Student team literature: students work in pairs or small teams to read together selected high-interest novels, poetry, and plays, and to discuss comprehension questions provided in guides. (4) Self-selected reading and writing centers: each student can choose items to read independently, do various writing activities, or listen to an audiotape accompanying a book.

Professional Development

Strategic Reading teachers attend a 3-day workshop for intensive initial professional development. Each component of the *Strategic Reading* course is shown in a simulated classroom where participants play the role of student and then of teacher.

Expert in-class peer coaches are the backbone of the teacher support systems for the teachers. Each coach is an outstanding teacher from the local district who has become expert in the *Strategic Reading* components and works full time coaching teachers in two local high schools. The coaches model-teach or co-teach lessons, make sure all materials are available, discuss strengths and weaknesses of lesson delivery, and otherwise troubleshoot in a collegial relationship. The coaches' work with teachers is strictly confidential and never contributes to formal or informal evaluations, so that a level of trust is established to support each teacher's efforts. In addition, university specialists conduct short refresher workshops at each school throughout the term. Coaches report to supervisors at the university and confer about program improvement and individual effectiveness.

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Assessment and Progress Monitoring

Using the Gates-MacGinitie Reading Test, incoming high school freshmen are pre-tested to determine a grade equivalent in reading. Students who score at the 7th grade level or below are selected as candidates for *Strategic Reading*. During the daily 20-minute self-selected reading and writing element of the course, teachers conduct individual student interviews and informal reading inventories. Student writing samples are solicited, and teachers share feedback during conferences with students.

Additionally, teachers observe students regularly while they read to determine whether they effectively use skills and strategies. Anecdotal records are kept in an individual literacy folder that follows students throughout their participation in "double dose" courses, grades 9-12. All test data, including unit assessments and semester finals, are kept in the *Strategic Reading* literacy folders.

Evaluation

Students in the *Strategic Reading* course and double-dose intervention in Baltimore and Philadelphia have shown significantly greater gains in comprehension and vocabulary sections of standardized reading tests than students in control groups receiving only the school's usual English 1 curriculum. Results for the 1999-2000 school year show that in a Baltimore school, the experimental group made average gains of 1.9 years, compared to control group gains of only 1 year. Similarly, during the first semester of the 2000-2001 school year, 51% of the students gained more than 5 months in reading ability, with 34% gaining more than 1 year in reading ability. (*JHU*, 2001)

The most recent results come from Franklin High School in Philadelphia, a high-poverty, neighborhood high school. The following table shows the first-semester results for all classes combined. Only students who were enrolled in the school for both the pre-course Gates-MacGinitie test in September and the post-course test in January are included.

Fall 2001-Winter 2002 Gains Over 4 Months on Gates-MacGinitie Reading Test
(Average net gain in grade equivalents (ge): 9 months)

% of students gaining > 1.0 ge	40%
% of students gaining > 0.5 ge	62%
% of students with no change or loss	23%
Total number of students tested: 146	

The results indicate that a typical student gained nearly a year's worth of reading ability in a 4-month period. Four out of 10 students gained more than a year, some substantially more. Almost two-thirds of students had catch-up gains, improving their reading ability by at least 5 months over a 4-month period. About a quarter of the students showed no gain. Overall, greater gains were made on the reading comprehension sub-test, than on the vocabulary sub-test. For reading comprehension median performance rose from a 5.3 grade equivalent to a 6.5 grade equivalent, while for vocabulary it rose from 5.3 to 5.9.

Planning for Implementation

Interested schools and districts are provided multiple opportunities to explore the possibilities of TDHS as a reform model. Schools enter into a planning year designed collaboratively by TDHS staff and district personnel. During this pre-implementation stage curricular components such as *Strategic Reading* are highlighted in interactive workshops conducted by TDHS coaches and trainers. Training environments are arranged to include teacher gallery walks that feature *Strategic Reading* materials and videotapes of actual lessons. During this last stage of pre-implementation TDHS facilitators and coaches consult with prospective teachers.

During the implementation of *Strategic Reading*, a curriculum coach is assigned to assist teachers through modeled lessons, co-teaching, and feedback in a non-evaluative manner. Ongoing staff development is available during the entire school year. When possible, TDHS/Johns Hopkins University coordinates with other local universities to enable teachers to receive graduate credit and to encourage state and local systems to provide professional certification hours.

JHU, 2001

The Strategic Instruction Model

The University of Kansas Center for Research on Learning (KU-CRL) has conducted research for nearly 25 years to develop ways to help students meet the literacy demands of life. The resulting *Strategic Instruction Model*, or *SIM*, strives to help teachers make decisions about what is of greatest importance in their content area, what can be taught to students to help them learn, and how to teach them well. Keith Lenz, Ph.D., senior research scientist at KU-CRL presented the essential elements of the model.

The School Population

The program was originally designed for use in secondary resource rooms and special education classrooms but has gradually been expanded to create a school-wide approach to improving adolescent literacy in secondary schools. As a result, the model has been increasingly adopted by general education teachers for use in core curriculum content area classes as well as classes designed to emphasize the development of reading, writing, and other literacy areas. In addition to individual studies on various components of the model, formal evaluations related to school-based implementation have been conducted in Tuskegon, Michigan; Modesto, California; and Topeka, Kansas.

Instructional Approach of the Model

SIM encompasses two kinds of evidence-based interventions:

1. Teacher-focused interventions (Content Enhancement Routines) are directed at how teachers think about, adapt, and present their critical content in a "learner-friendly" fashion. These interventions are designed for use during group instruction in core curriculum classes.
2. Student-focused interventions (Learning Strategies Curriculum) are designed to provide the skills and strategies students need to learn and apply the content. These interventions are designed for use in core curriculum classes and in classes targeting reading, writing, and other study strategies.

The framework for the model is a five-component continuum of action:

1. Ensure mastery of critical content. All students learn critical content required in the core curriculum regardless of literacy level. Teachers compensate for limited literacy levels by using explicit teaching routines, adaptations, and technology to promote content mastery.

2. Weave shared strategies across classes. Teachers embed selected learning strategies in core curriculum courses through direct explanation, modeling, and required application in content assignments.

3. Support mastery of shared strategies for targeted strategies. Students who have difficulty mastering the strategies presented in courses by content teachers are provided more instruction in the strategies through specialized, more intensive instruction delivered by support personnel.

4. Develop more intensive course options for those who need it. Students learn literacy skills and strategies through specialized, direct, and intensive instruction in listening, speaking, reading, and writing through carefully designed and delivered courses.

5. Develop more intensive clinical options for those who need it. Students with underlying language disorders learn the linguistic, metalinguistic, and metacognitive underpinnings they need to acquire content literacy skills and strategies.

The following are a few of the key learning strategies supporting reading: the Word Identification Strategy, which emphasizes decoding and word attack skills; the Paraphrasing Strategy, which supports the identification of main ideas and inferences in text, in addition to summarization skills; the Self-Questioning Strategy, which focuses on reading for information and the student's self-regulation of comprehension; and the Visual Imagery Strategy, which reinforces conceptual and story structure understanding, in addition to recall of prose material. Vocabulary is reinforced with key word mnemonics and the use of prior knowledge. Teachers are also given a set of content enhancement strategies to activate students' background knowledge and to build motivation.

Professional Development

A national network of over 1,200 certified *SIM* trainers conducts teacher training. Training in the Learning Strategies Curriculum and Content Enhancement Routines is planned around a self-assessment performed by the school staff and a planning meeting with a *SIM* trainer. Success with *SIM* is contingent on ongoing staff development and support that must be maintained over a multi-year school improvement effort. Trainers meet with as many as 25 teachers for 3-6 hours per strategy. Teachers practice the strategy in their classrooms and participate in scheduled debriefing and problem-solving strategies. There are over 40 different program components in *SIM* that schools can incorporate as they construct a staff development program tailored to meet a school's adolescent literacy improvement goals.

Assessment and Progress Monitoring

Each learning strategy intervention has a teachers manual that includes procedures for using curriculum-based measures to assess student progress and to provide feedback to guide instruction. Schools may use a variety of assessments to diagnose student reading difficulty, and to monitor progress and measure achievement; however, tests that have been used frequently by the model developer for evaluation purposes are the Woodcock Johnson Reading Mastery Test, Stanford Diagnostic Reading Test, the Gates-MacGinitie Reading Comprehension Test, and the Slosson Diagnostic Screening for Reading.

Evaluation

As one of many evaluations, in 1997, in an inner-city high school, *SIM* instruction was made available to all incoming 9th graders scoring 2 years below grade-level on the

Slosson Diagnostic Reading Test. Students received intensive daily instruction in the Word Identification Strategy (decoding) until mastery was achieved. Significant gains were found among African American and Latino boys, and students with learning disabilities. All had mean gains of about three grade levels in 3-8 weeks, whereas students in the comparison group—matched by ability-level, gender, and ethnicity—made either small or no gains on average.

Planning for Implementation

Effective instructional environments for promoting adolescent literacy consist of at least four factors: (1) clarifying the roles and expectations of teachers, (2) supporting collaboration among general education teachers and support staff and across teachers, (3) creating an environment that strongly values literacy and strategic approaches to learning, and (4) a site-based professional development model that supports, refines, and sustains high-quality implementation acro school-wide.

Discussion of the Four Models

The comments made during the discussion periods following the presentations of each model were similar and are summarized here in a categorical manner rather than as applicable to each model. The comments suggest that there are three major categories of questions that should be asked about any model.

First, what elements should be considered to be essential in a model for purposes of this assessment? The following should be considered: the nature and curricular components of the program; the nature of the teaching approach and techniques; time allocation and frequency of the intervention; materials used; necessary school infrastructure—support of administration, coaches; professional development components; student assessment tools and criteria—content-based measurement, functional measurement, standardized testing; evaluation methods—randomized design, comparison groups, sample size, data collection methods, generalizability, short-term vs. long-term outcomes; challenges to adopting and sustaining the program—planning, liaisons with university teacher preparation programs, funding, ongoing training, mainstreaming, cultural setting.

Second, to build a research agenda on models of instruction and education for adolescent readers, it is valuable to begin by asking what is the theoretical knowledge of psychological functioning that underlies the specific practice model and how does that theory affect design and outcomes. Alternative theoretical perspectives are the following:

1. Behaviorist paradigm—bottom-up processing
2. Schema theory—top-down, knowledge-driven processing
3. Interactive model—cognitive science, novice-to-expert progression

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4. Self-regulation perspective—comprehensive merger of cognitive, knowledge, motivational, and social factors in learning and reading
5. Cultural participation perspective—learning as the acquisition of competence and beliefs in social participation.

Third, what are the elements needed for a theory-based, empirically justifiable knowledge base for instruction in adolescent literacy? The following elements were suggested:

1. Theory of the processes of reading
2. Theory of the development of the reading process
3. Theory of how instruction influences reading processes, especially corrective reading
4. Theory of how people learn to provide the instruction
5. Measures of process, development, instruction, learning to instruct
6. Instructional frameworks—transferable, sustainable, scalable
7. Experimental tests of instructional alternatives at all levels of theory.

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